

### Abstract

5 A multi-function air treatment apparatus includes a photo-ionizing assembly and  
a negative ion generator. The photo-ionizing assembly emits a predetermined  
wavelength of light that produces ozone when it impinges upon air. When a  
portion of the light impinges on a target material, radicals and ions that bond  
with and reduce some of volatile organic compounds in the air are produced.  
10 The negative ion generator produces negative ions and a radiating negative  
electrostatic field from an outer high dielectric surface by an electrical charge  
applied to an enclosed conductive inner surface.